

Abstracts

These selected abstracts and titles from the world literature are arranged in the following sections:

Syphilis and Other Treponematoses

(Clinical and Therapy; Serology and Biological False Positive Phenomenon; Pathology and Experimental)

Gonorrhoea

(Clinical; Microbiology; Therapy)

Non-Specific Genital Infection

Reiter's Disease

Trichomoniasis

Candidosis

Genital Herpes

Other Sexually-Transmitted Diseases

Public Health and Social Aspects

Miscellaneous

Syphilis and other treponematoses (Clinical and therapy)

Aortic valve replacement in patients with syphilitic coronary arteritis SAMAN, H. A. (1973)

J. cardiovasc. Surg., 14, 247

This paper from the Cardio-Thoracic Unit, Royal Infirmary, Edinburgh, describes six patients with syphilitic aortitis who had aortic valve incompetence and angina pectoris. The author thinks that the absence or presence of stenosis of the coronary ostia is of great significance. He observed that the three patients who made a full recovery had precoronary angiography and that the other three developed myocardial infarction and myocardial failure postoperatively because of difficulties in perfusing the coronary arteries during aortic valve replacement. He suggests that, before surgery for syphilitic aortitis, especially in the presence of angina, aortography and coronary angiography are necessary preoperatively. If coronary ostial stenosis is present, coronary ostial endarterectomy or aorto-coronary venous grafting may be required. *J. R. W. Harris*

Endemic syphilis SCOTT, F. P., and LUPS, J. G. H. (1973) *S. Afr. med. J.*, 47, 1347

In this article from the Department of Dermatology at Bloemfontein, the author draws attention to the occurrence of endemic syphilis among Bantu children under the age of 10

years living in the area around Bloemfontein. He has observed this form of syphilis only during the past few years and one hundred patients were discovered and treated during 1972.

Endemic syphilis is relatively uncommon in other parts of the Republic of South Africa but has been reported in the Karoo and north-western Cape areas and is also common in Botswana. There has been a marked increase in syphilis from 2.5 per cent. in 1968 to 15 per cent. in 1972 among the Bantu in the area of Bloemfontein.

The author suggests that the occurrence of endemic syphilis and the great increase in acquired syphilis may be related. *J. R. W. Harris*

Dose-related seroreversal in syphilis DURST, R. D.,

SIBULKIN, D., TRUNNEL, T. N., and ALLYN, B. (1973) *Arch. Derm.*, 108, 663

A proportion of patients treated for early syphilis with penicillin still have detectable antilipoidal antibody 2 years after treatment. This is commoner after treating secondary than after treating primary infections. The authors treated forty patients with secondary infections with 2.4 m.u. benzathine penicillin G at their first visit, followed by further doses of 2.4 and 1.2 m.u. at intervals of 3 to 5 days. Initially 38 of the patients had VDRL tests reactive at titres of 1:32 or above and two were reactive at 1:16. After a year, seventeen had negative VDRL tests; after 18 months this number

had risen to 33, and after 2 years all had become seronegative.

Although the series is not very large, the good clinical and serological response to this high dosage treatment suggests that it warrants a more extensive trial in early syphilis.

A. E. Wilkinson

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor.]

Penicillin and syphilis

EDITORIAL (1973) *N.Z. med. J.*, 78, 126

Failure of penicillin therapy in preventing congenital syphilis

(Échec de la pénicillinothérapie dans la prévention d'une syphilis congénitale) MOULIN, G., MAGNIN, P., MONNET, P., and THIERS, H. (1973) *Bull. Soc. franç. Derm. Syph.*, 80, 306

Syphilitic filamentous keratitis

[in Spanish] MATAS, M. C. (1973) *Arch. Soc. esp. Oftal.*, 33, 607

Bipolar indurated chancres in syphilis VISHNEVETSKY, A. M.,

and KELNER, R. I. (1973) *Vestn. Derm. Vener.*, No. 11, p.87

Dinitrochlorobenzene sensitization in congenital syphilis

[letter] PARENT, M. A., and SMYTHE, P. M. (1973) *Lancet*, 2, 1273

Fits in secondary syphilis [letter]

GUILBRIDE, A. H. H. (1974) *Brit. med. J.*, 1, 119

Mechanism of exacerbation in syphilis RODIN, YU. A., and DOLGOV, A. D. (1973) *Vestn. Derm. Vener.*, No. 11, p. 56

Syphilis (Serology and biological false positive phenomenon)

Evaluation of semi-automated Fluoro-Kit for FTA-ABS testing

TOURVILLE, D., KNAUF, R., and WERTLAKE, P. (1973) *J. invest. Derm.*, **61**, 355

During a period of 11 months the Automated Reagin Test (ART) was carried out as a screening procedure on sera from 21,331 patients admitted to the Saint Barnabas Medical Center, Livingston, New Jersey, U.S.A. Sera found reactive were tested by a semi-automated FTA-ABS test for which pre-standardised reagents were supplied as a complete kit (CSI Fluoro-Kit). Aliquots of these reactive sera were also sent to a reference centre where VDRL and standard FTA-ABS tests were performed.

170 sera were reactive in both the VDRL and ART tests. 35 sera were reactive in the ART but not the VDRL, and reference FTA-ABS tests were not done on these. 117 sera were found reactive by the Fluoro-Kit test and 113 by the standard FTA-ABS test; agreement between the two methods was 95.6 per cent. The Fluoro-Kit is thought to provide a reliable confirmatory test and to increase the ease and speed with which the FTA-ABS test can be performed.

Seven of the 35 sera which gave reactive ART but negative VDRL tests were found to be reactive by the Fluoro-Kit FTA-ABS test, suggesting that the ART is more sensitive than the VDRL test as a screening test for syphilis. *A. E. Wilkinson*

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor.]

A comparative study of the fluorescent treponemal antibody-absorbed test and some existing methods available for the serological diagnosis of

syphilis HENRICHSEN, C., and HARRIS, A. B. (1973) *Med. Lab. Tech.*, **30**, 359

501 sera selected from patients thought likely to have syphilis on clinical or epidemiological grounds were studied. The FTA-ABS test results were used as a baseline for comparison because of its high sensitivity and specificity, and the results of four screening tests were compared with it. The numbers of reactive sera were:

FTA-ABS test, 113;

VDRL test, 84;

Reiter protein complement-fixation (RPCF) test, 79;

Wassermann reaction, 72;

Kahn test, 66.

A combination of the VDRL and RPCF tests detected 100 of the 113 FTA-ABS-reactive sera. None of these 113 sera gave positive results with the WR or Kahn unless the VDRL or RPCF tests was also reactive.

A combination of the VDRL and RPCF tests is thought to be the most effective for screening purposes. FTA-ABS tests should be carried out for confirmation on sera found reactive in one or both these screening tests and as a routine on sera from 'high-risk' patients and on those with possible latent or congenital syphilis.

A. E. Wilkinson

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor.]

Syphilis in the Bantu of Soweto. A serological study

EISENBERG, L. (1973) *S. Afr. med. J.*, **47**, 2181

Soweto is a complex of townships to the southwest of Johannesburg inhabited by about 600,000 Bantu and, in one township, Coloured people. The area is served by six clinics. This report covers the period 1949 to 1971 and analyses the results of Kolmer Wassermann reactions which were carried out routinely on 259,629 antenatal patients, and when latent syphilis was suspected on 84,964 persons attending outpatient clinics.

In 1949 the incidence of positive tests among Bantu antenatal patients was 20.8 per cent. This remained fairly constant until 1954. In 1955,

treatment with arsenic and bismuth was replaced by penicillin (7.2 m.u. procaine penicillin in aluminium monostearate). The incidence of seropositivity then fell progressively, reaching 7.2 per cent. in 1963, but it later rose to 10 to 11 per cent. The pattern in Bantu outpatients showed a similar trend, but at a higher level; selection of patients because of clinical suspicion of infection probably explains this difference. The rise since 1963 in this group has been very marked, and in 1971 42.1 per cent. of these outpatients had positive serological tests. The incidence of these among Coloured antenatal patients was lower than among the Bantu. It varied from 17.9 per cent. in 1949 to 12.2 per cent. in 1955 and then fell sharply, reaching 2 per cent. in 1970 and rising to 4.6 per cent. in 1971.

Although some of these positive results may have been non-specific, these figures point to an alarmingly high incidence of treponemal disease in these communities.

A. E. Wilkinson

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor.]

The *Treponema Pallidum* haemagglutination test (TPHA) on dried blood and serum [In Italian] CHIEROGATO, G. C., DEI ROSSI, C., and MAZEBO, S. (1973) *G. Ital. Derm.*, **108**, 628

Tests were carried out on specimens from 43 patients with syphilis at various stages and from five who were not infected. 0.05 ml. volumes of serum and blood were allowed to dry on filter paper at room temperature for 2 to 15 days and then eluted for 1 hour in 1.95 ml. of the absorbing diluent used in the TPHA test; from this 1:20 dilution further dilutions of 1:80 and 1:160 were prepared. These were tested in parallel with similar dilutions made from whole serum and the results compared. Complement-fixation tests with cardiolipin and treponemal antigens, VDRL, and TPI tests were also performed.

The results of TPHA tests on the eluates from dried serum and blood showed complete agreement with those on whole serum. It is suggested that this method of handling specimens may be of value in hot countries

where blood specimens may deteriorate on the way to the laboratory; the sample can also be obtained by finger prick rather than by venepuncture.

[This method, using circles of absorbent paper which take up a fairly constant amount of blood has been found practical under tropical conditions for collecting specimens for FTA tests.] *A. E. Wilkinson*

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor.]

Immunofluorescence test with absorption in the serodiagnosis of syphilis

OVČINNIKOV, N. M., BEDNOVA, V. N., SAGDEEVA, L. G., and ORLINA, E. A. (1974) *Vestn. Derm. Vener.*, No. 1, p.58

Immunoglobulins in patients with syphilis

REZNIKOVA, L. S., STEPHANI, D. V., and STOYANOVA, O. A. (1974) *Vestn. Derm. Vener.*, No. 1, p.63

Treponemicidal properties of sera from normal subjects

VASILIEV, T. V., and SAZONOVA, L. V. (1974) *Vestn. Derm. Vener.*, No. 1, p.54

Syphilis (*Pathology and experimental*)

Immunity to syphilis. I. Passive transfer in rabbits with hyperimmune serum

PERINE, P. L., WEISER, R. S., and KLEBANOFF, S. J. (1973) *Infect. and Immun.*, 8, 787

The immune serum used was collected from rabbits which were given intracutaneous injections of 10^6 *Treponema pallidum* at 3-monthly intervals until they became resistant to re-infection. The pooled serum had a VDRL titre of 1:64, a TPI titre of 1:256 and a FTA titre of 1:2,048.

Sixteen rabbits were infected by the intracutaneous injection of 10^6 *T. pallidum* at each of six sites on the back. 24 hours after chancres first appeared eight animals were given 80 ml. immune serum/kg. and four normal serum intraperitoneally; four were untreated. Chancres in all the

animals increased progressively in size, reaching 10 to 15 mm. in diameter by the 10th day. After this, those on the animals given immune serum regressed and most became inconspicuous during the 3rd and 4th week, and it was difficult to demonstrate treponemes in them. They later enlarged and became indurated and followed a similar course to those in the control groups of animals.

Injection of 80 ml. immune serum/kg. 24 hours before inoculation with 10^6 *T. pallidum* did not delay the appearance of chancres, but when the infecting dose was reduced to 10^3 organisms there was a significant delay in the appearance of chancres. Two rabbits given five and seven doses of 80 ml. immune serum/kg. at 3 to 5-day intervals did not develop chancres while the serum was being given, but these appeared 4 to 12 days after treatment was stopped.

The authors suggest that the effect of immune serum is to prevent an increase in the numbers of treponemes, although all, and perhaps the majority, are not killed.

A. E. Wilkinson

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor.]

First results of an electron microscopic study of the yaws papilloma

DOCKX, P. (1973) *Arch. belges Derm.*, 29, 129

Activity of ceruloplasmin and the iron-binding capacity of transferrin in the cerebrospinal fluid of patients with contagious forms of syphilis

BORISENKO, A. M. (1973) *Vestn. Derm. Vener.*, No. 11, p.60

Gonorrhoea (*Clinical*)

Neonatal gonococcal infection. I. Orogastric contamination with *Neisseria gonorrhoeae*

HANDSFIELD, H. H., HODSON, W. A., and HOLMES, K. K. (1973) *J. Amer. med. Ass.*, 225, 697

The authors present a detailed study to assess the significance of orogastric aspirates (OGA) positive for *N. gonorrhoeae* in neonates.

The study was carried out in Seattle over a 4-year period (January, 1968, to January, 1972). Fourteen *N. gonorrhoeae*-positive OGAs were obtained in that period.

At the University Hospital between July 1, 1970, and November 30, 1971, OGA investigations were carried out at the discretion of the attendant obstetrician on 187 (8 per cent.) of 2,340 live births. Five of these were positive for *N. gonorrhoeae* (i.e. 2.7 per cent. of those tested).

These OGA specimens were Gram-stained and examined for bacteria and also for WBCs per oil immersion field. Direct inoculation was made on to blood agar for both aerobic and anaerobic incubation, and also into thioglycollate broth and on to chocolate agar and Thayer-Martin medium. Endocervical, endometrial, and placental samples were similarly analysed after transfer to the laboratory in Amies transport medium. *N. gonorrhoeae*, β -haemolytic streptococci, *Escherichia coli*, *Klebsiella* sp., *Proteus mirabilis*, *Pseudomonas aeruginosa*, coagulase-positive staphylococci, *Haemophilus influenzae*, *Diplococcus pneumoniae*, *Bacteroides* sp., and *Clostridium perfringens* were regarded as potentially pathogenic, whereas *Corynebacterium vaginale*, *Lactobacillus*, diphtheroids, coagulase-negative staphylococci, non-haemolytic and α -haemolytic streptococci, and *Candida* sp. were classified as non-pathogens.

Clinical evaluation of the 187 births was retrospectively carried out from a study of the relevant case records and the following parameters were considered:

(i) Prematurity (<37 weeks' gestation);

(ii) Prolonged rupture of membranes (PROM) (>24 hours before delivery);

(iii) Maternal pyrexia (>38° C. during or within 24 hours of completion of labour);

(iv) Clinical suspicion of sepsis on the bases of lethargy, anorexia, tachypnoea, and other non-localizing signs;

(v) Socioeconomic status of the patient.

Results showed that there was a statistically significant positive relationship between the presence of

gonococci in the OGA and the first four of these parameters, but that the socioeconomic status of the mother was of no significance. Moreover, mothers whose peripartum endocervical, endometrial, or placental smears or cultures were positive for *N. gonorrhoeae* showed an incidence of premature labour and PROM significantly higher than women whose infants were either OGA-negative for pathogens, or OGA-positive for pathogens other than *N. gonorrhoeae*. On considering the relationship between gonococcal OGA contamination and PROM, the authors point out that it was not possible to determine how often either of these two parameters was the cause or the effect of the other.

The authors make very interesting comments on the effect of gonococcal infection in neonates. For instance, they advocate that all cases of gonococcal ophthalmia neonatorum should be carefully investigated for concomitant infection of the anus and respiratory tract. They report a case of their own of neonatal gonococcal pharyngitis and refer to the literature in which cases of neonatal gonococcal meningitis and arthritis are recorded.

They quote two recent series in the U.S.A. in which the incidence of genital gonorrhoea in pregnant women was 2.5 and 7.3 per cent. respectively. This paper has already shown the adverse effect of gonococcal infection on pregnancy and the neonate. The tendency for gonorrhoea to disseminate in pregnancy is already well known. The authors therefore advocate that 'an endocervical culture for *N. gonorrhoeae* should be included as a routine part of the pre-natal care'.

J. D. H. Mahony

Gonorrhoeal conjunctivitis

M. J. VALENTON and R. ABENDANIO (1973) *Canad. J. Ophthalmol.*, **8**, 421

Thirteen cases (nineteen infected eyes) of gonorrhoeal conjunctivitis in Filipino adults have occurred after using urine as a form of eye wash for the treatment of conjunctivitis. Except for one patient, all twelve cases occurred during a period of 2 months at a time when an epidemic of acute catarrhal conjunctivitis was raging in the city of Manila, Philippines.

Urethral smears and cultures done on seven patients were positive for *Neisseria* organisms. Corneal perforation occurred in one out of the nineteen infected eyes. All patients responded dramatically to either tetracycline or penicillin therapy.

Howard Reed

Extra-genital gonorrhea

TURGEON, P., LAVERDIÈRE, M., RICHER, G., TURGEON, F., and ROBERT, J. (1973) *Un. méd. Canad.*, **102**, 1883

Gonorrhoeic monarthrititis of the wrist, a rare complication

LEYH, F., and LÖHR, J. (1973) *Hautarzt*, **24**, 442

Gonorrhoea (Microbiology)

Gonorrhoea detection by urine sediment culture

MOORE, G., PITTARD, W. B., III, MOSCA, N., and O'BRIEN, M. (1973) *J. Amer. med. Ass.*, **224**, 1499

In view of the increased prevalence of gonorrhoea, a simple screening procedure for its diagnosis would be most desirable. 392 male patients were examined in the Venereal Disease Clinic (Richmond, Va) to determine whether culturing of urine sediment was such a procedure.

Four specimens were taken from each patient as follows:

- (1) About 70 ml. of freshly voided urine;
- (2) A smear from the urethral orifice;
- (3) A urethral scraping using a sterilized platinum loop;
- (4) A specimen obtained by inserting a dry, cotton-tipped, sterile swab into the urethra.

Each specimen of urine was vigorously shaken within 2 hrs of collection and 7 ml. of it was centrifuged. The centrifuged sediment was used to inoculate Thayer-Martin selective media plates, as were the loop and swab specimens.

Positive cultures for *Neisseria gonorrhoeae* were obtained by at least one method from 238 patients; 222 (93.2 per cent.) were positive by all three methods, 234 (98.3 per cent.) by loop and/or swab methods, and 224

(94.1 per cent.) by urine sediment culture.

Of the 238 patients, 44 had no signs or symptoms of gonorrhoea; 35 of these had positive cultures by all three methods, 93 per cent. being positive by loop, 91 per cent. by swab and 89 per cent. by sediment culture. The differences were not statistically significant.

Gram-negative intracellular diplococci were found in 97.5 per cent. of urine sediment smears and 95.1 per cent. of urethral smears from the 234 patients with positive cultures by loop and/or swab methods.

It appears that the urine sediment culture technique is a reliable means of detecting *N. gonorrhoeae* in both symptomatic and asymptomatic men, when compared with the traditional loop and swab method.

C. S. Ratnatunga

Evaluation of the vaginal tampon as a means of obtaining cultures for *N. gonorrhoeae*

MCCORMACK, W. M., LEE, Y.-H., HOLTROP, H. R., and RYCHWALSKI, R. (1973) *J. infect. Dis.*, **128**, 129

Cultures of self-inserted tampons were compared with endocervical cultures from 100 women suspected of having gonorrhoea, 55 of whom were found to be infected. Cultures of the tampons were equivalent to endocervical cultures for detection of *Neisseria gonorrhoeae* when properly inserted tampons were cultured as soon as they had been removed from the vagina. If the tampons were placed in plastic containers and allowed to stand at room temperature before they were cultured, there was a progressive decrease with time in the number of gonococcal isolations. After 2 hrs, gonococci could be recovered from 79.4 per cent. of the tampons that originally contained these organisms. If these tampons were allowed to remain at room temperature overnight, less than one-third of them contained gonococci. Self-obtained cultures for gonococci using vaginal tampons may be a useful, inexpensive, and acceptable means of screening women for asymptomatic gonorrhoea.

Authors' Summary

Nutritional profiles of *Neisseria gonorrhoeae*, *Neisseria meningitidis*, and *Neisseria lactamica* in chemically-defined media and the use of growth requirements for gonococcal typing CATLIN, B. W. (1973)

J. infect. Dis., **128**, 178

This paper describes a chemically-defined medium which supported luxuriant growth of 74 strains of *Neisseria gonorrhoeae*. Quantitative studies in a fluid medium showed a generation time of 60 minutes or less; an inoculum of 2×10^5 to 6×10^6 colony-forming units (cfu) per ml. increased to a density of 10^9 cfu per ml. after 24 hrs' incubation. Growth of the 74 strains on the complete solid medium was compared with that on the same medium deficient in one or more components. This showed marked differences in the nutritional requirements of various strains. These could be divided into thirteen auxotypes on the basis of their patterns of growth response to hypoxanthine, thiamine pyrophosphate, thiamine, methionine, proline, isoleucine, and arginine. The auxotype appeared to be stable for a given strain and pairs of related strains showed the same auxotype.

Neisseria meningitidis was less exacting in its nutritional requirements, and fifty strains grew on a relatively simple agar medium containing mineral salts, lactate, glutamate, arginine, glycine, and serine. A few strains required lysine, histidine, or cysteine in addition. *Neisseria lactamica* required biotin and some additional components. Both *N. meningitidis* and *N. lactamica* grew well on the complete defined medium for *N. gonorrhoeae*.

These methods appear to provide the basis for a system of gonococcal typing which would be of epidemiological value.

A. E. Wilkinson

The IF-test in the diagnosis of gonorrhoea [in German]

RUFLI, T. (1973) *Dermatologica (Basel)*, **146**, 269

Gonorrhoea (Therapy)

Therapeutic effectiveness of durable preparations of

penicillin in men with gonorrhoea in 1967-1971

POTAPNEV, F. V., LEVOCHKIN, A. M., and SHMIDT, N. S. (1974) *Vestn. Derm. Vener.*, No. 1, p.90

Therapeutic effectiveness of sulphadimetoxin in patients with gonorrhoea SKURATOVICH, A. A.,

POTAPNEV, F. V., and BOROVIK, V. Z. (1973) *Vestn. Derm. Vener.*, No. 12, p.71

Therapy of postgonorrhoeal urethritis using kanamycin and nitrofurans

BUKHAROVICH, M. N., and MAVROV, I. I. (1973) *Vestn. Derm. Vener.*, No. 11, p.84

Experience with spectinomycin in the treatment of gonorrhoea in females WINKLER, A. (1974)

Munch. med. Wschr., **116**, 107

Present-day treatment of gonorrhoea (Traitement actuel de la gonococcie) SIBOULET, A.,

MAJEWSKI, E., and BUSQUET, P.-Y. (1973) *Bull. Soc. franç. Derm. Syph.*, **80**, 247

Non-specific genital infection

Treatment of non-specific urethritis with a triple tetracycline CARROLL, B. R. T.

(1973) *Brit. J. clin. Pract.*, **27**, 211

In this study, 112 men with non-specific urethritis were treated with the triple tetracycline 'Deteclo' (which contains tetracycline, chlortetracycline, and demethylchlortetracycline in the ratio 1:1:0.6). One 300-mg. tablet was given twice daily for 20 days.

Successful treatment was claimed if:

- (1) There was no urethral discharge;
- (2) The urine was macroscopically clear;
- (3) The expressed prostatic fluid contained no polymorphonuclear leucocytes, after a period of surveillance of approximately 3 months.

Of the fifty men who completed surveillance, 42 (84 per cent.) were considered cured. No side-effects were complained of by any of these patients.

J. D. Oriel

Infections associated with genital *Mycoplasma* SOLOMON, F.,

CASPI, E., BUKOVSKY, I., and SOMPOLINSKY, D. (1973) *Amer. J. Obstet. Gynec.*, **116**, 785

Eleven cases are reported in which *Mycoplasma hominis* or T-mycoplasma were isolated under circumstances indicating that they caused suppuration or sepsis. Of three women with pelvic inflammation *Mycoplasma hominis* was isolated in two from peritoneal pus and T-mycoplasma from the third patient. All recovered with broad-spectrum antibiotics. Five patients suffered from postoperative infection after Caesarean section and *M. hominis* and/or T-mycoplasma were isolated from the pus or the blood in all cases. *M. hominis* was also isolated from the blood from three patients with puerperal sepsis, premature rupture of the membranes, or abortion.

[The isolation of genital mycoplasmas from the blood in these cases of general sepsis is the most convincing evidence yet obtained indicating their potential virulence in man.]

G. W. Csonka

Acute urethritis in male college students MCCHESENEY, J. A.,

ZEDD, A., KING, H., RUSSELL, C. M., and HENDLEY, J. O. (1973) *J. Amer. med. Ass.*, **226**, 37

62 unselected male students with urethritis were seen at the Student Health Service, University of Virginia, and were investigated together with seventy students without urethritis acting as controls. None of the controls had received antibiotics for the past 3 weeks. In patients with urethritis two swabs were taken, one for the isolation of gonococci and the other for the isolation of T-mycoplasmas. Urine was also similarly examined and since it was found that the isolation rate of T-mycoplasma from urine and urethral swabs was similar, urine only was taken from

the controls. In the subsequent comparison, only the results from urine obtained from patients and controls were used. Gonococci were isolated from only five (8 per cent.) of students with urethritis; the rest were diagnosed as suffering from NGU. The period between last sexual contact and the onset of NGU was 2 to 35 days (mean 6). 43 (79 per cent.) of 57 patients with NGU and nineteen (27 per cent.) of the seventy asymptomatic controls had T-mycoplasmas in their urine. This difference is statistically significant. Treatment of NGU with tetracycline (53 patients) or erythromycin (4 patients)—1 g/day for 7-10 days—was effective in clearing symptoms in all but five who responded to a second course of tetracycline. Post-treatment cultures were positive for T-mycoplasmas in 28 per cent. which is similar to that seen originally in the control group.

It is concluded that NGU is much more common than gonorrhoea in these students and that T-mycoplasmas may be a cause of NGU.

G. W. Csonka

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Mycoplasmas LEADING ARTICLE
(1973) *Med. J. Aust.*, **2**, 1033

Isolation of *Mycoplasma hominis* from cerebrospinal fluid BØE, Ø., DIDERICHSEN, J., and MATRE, R. (1973) *Scand. J. infect. Dis.*, **5**, 285

Serological comparison of bovine T-mycoplasmas HOWARD, C. J., and GOURLAY, R. N. (1973) *J. gen. Microbiol.*, **79**, 129

Cultivation of mycoplasmas on cellulose ester substrates GABRIDGE, M. G. (1973) *Appl. Microbiol.*, **26**, 414

Reiter's Disease

Lymphoblast transformation test with *Bedsonia* antigen in old and recent Reiter's syndrome and in ankylosing spondylitis.

(Le test de transformation lymphoblastique avec l'antigène bedsonien

dans les syndromes de Feissinger-Leroy-Reiter anciens et récents et dans les spondylarthrites ankylosantes).

DOURY, P., PATTIN, S., and DUROSOIR, J.-L. (1973) *Rev. Rhum.*, **40**, 643

Trichomoniasis

Treatment of trichomoniasis in the female with a single dose of Tinidazole RÖSEMANN, G. W. E., and VAUGHAN, J. (1973) *S. Afr. med. J.*, **47**, 1222

A new trichomonicide, Fasigyn (tinidazole), has been used in a single dose of 2 g. orally administered, with excellent results. The overall cure rate for *Trichomonas vaginalis* infections has been 93.6 per cent. in the female population studied. The failures could be attributed to re-infection by another male consort, or possibly to the presence of proved concomitant bacterial vaginitis which is known to inactivate trichomonicides.

It is suggested that the single-dose therapy should be the treatment of choice.

Authors' summary

Investigation of possible sources of *Trichomonas vaginalis* infection (Untersuchungen über die Ansteckungsmöglichkeit durch *Trichomonas vaginalis*) SANTLER, R., and THURNER, J. (1974) *Wien. klin. Wschr.*, **86**, 46 3 figs, 11 refs

It has been suggested that *T. vaginalis* may infect individuals by asexual transmission owing to its reputed ability to survive outside the body for long periods, and this aspect has been investigated in this paper. The survival time and ability to multiply in cultures was determined in tap water, physiological saline, bath water containing soap or detergents, water chlorinated according to regulations for public baths, and 1 per cent. solutions of disinfectants including cetrimide and Savlon. *T. vaginalis* remained viable in tap water and saline for up to 24 hours, and bath-water containing the average amount of soap or detergents had no effect on the growth of the organism. Chlorinated water did not stop viability for

up to 24 hours and *T. vaginalis* as well as *Candida albicans* was isolated from several samples taken from swimming pools. The disinfectants were effective only if left in contact for at least 15 minutes. It is concluded that the transmission of *T. vaginalis* extra-sexually is a possibility.

G. W. Csonka

Therapeutic effect of certain antitrichomonal drugs

TSAGARELI, G. A., KURTSKHALIYA, V. A., TERTEROVA, T. G., and KEBURIYA, K. L. (1973) *Vestn. Derm. Vener.*, No. 11, p.52

Experimental models for the evaluation of systemic trichomonicides. Models for evaluation of trichomonicides TSAI, Y. H., and PRICE, K. E. (1973) *Chemotherapy (Basel)*, **18**, 348

Candidosis

Results with a new semi-synthetic polyene antibiotic in sixteen cases of skin candidosis FARRIS, G. (1973) *G. ital. Derm.*, **108**, 557

Contribution to the therapy of mucocutaneous candidoses. Controlled trial with methyl-partricin EL-MOFTY, A. M. (1973) *G. ital. Derm.*, **108**, 563

Phosphatase activity among *Candida* species and other yeasts isolated from clinical material (1973) SMITH, R. F., BLASI, D., and DAYTON, S. L. *Appl. Microbiol.*, **26**, 364

Genital herpes

Typing of *Herpesvirus Hominis* strains by indirect immunofluorescence and biological markers LEINIKKI, P. (1973) *Acta path. microbiol. scand.*, Sect. B., **81**, 65

The epidemiology of herpes simplex viruses (HSV) has recently attracted a great deal of interest. Types 1 and 2 HSV are distinguishable immuno-

logically by the kinetic neutralization test, which is a comparatively lengthy and difficult method.

In this study, nineteen strains of HSV isolated from patients with genital infections, eczema, stomatitis, and keratoconjunctivitis and two reference strains were serotyped by indirect immunofluorescence and the results compared with the cytopathic effect (CPE) and plaque size induced in cell cultures and confirmed using the kinetic neutralization test.

The results of serotyping by immunofluorescence, using acetone-fixed infected cells as antigens and rabbit antisera, were in complete accord with those obtained by kinetic neutralization. The CPE produced in BSC-1 monolayers was an unreliable marker. Although most type 1 strains (10/12) induced the cell rounding CPE often associated with this serotype, two induced the syncytial formation normally associated with HSV 2. Of HSV 2 strains, 2/9 induced syncytia and two cell rounding. Plaque size in Vero cells was a reliable marker, all type 1 strains inducing 'small' plaques and type 2 'large' plaques, although the author includes no measurements for these. The ability to plaque in chicken embryo fibroblast (CEF) was also a useful marker, most type 1 strains plaquing inefficiently in these cells, whereas all type 2 strains produced equal or even greater numbers of plaques in CEF compared with Vero cells.

Peter Reeve

Increasing antibody titres to Herpes simplex virus type 2 during follow-up of women with cervical dysplasia

SPRECHER-GOLDBERGER, S., THIRY, L., GOULD, I., FASSIN, Y., and GOMPEL, C. (1973) *Amer. J. Epidemiol.*, **97**, 103

Although women with carcinoma of the cervix frequently possess higher titres of HSV 2 neutralizing antibodies than other groups, the significance of such findings disappears when matched control groups are compared. Thus, although the risk of exposure to genital herpes virus infection and the risk of cervical carcinoma are apparently linked with

similar environmental factors, it is not possible to conclude that HSV 2 has a causal role in cervical carcinoma.

In this study specific neutralizing antibodies to HSV 2 were measured in the sera of 24 women with cervical dysplasia and 29 with atypical inflammatory cervical smears. Measurements were repeated during a 4 to 13-month follow-up period and compared with those obtained from 34 women of the same age but with normal cervical smears. Most of the women with cervical dysplasia (87 per cent.) had HSV 2 antibodies, but serum titres were not constant and showed a significant rise in 67 per cent. of cases. Although variations were found in HSV 2 titres in both the normal group and in those women with atypical smears, these were less frequent (24 and 21 per cent. respectively) than in those with cervical dysplasia. None of ten women who had hysterectomies because of carcinoma of the cervix showed any subsequent rise in antibody titre.

The authors conclude that rising antibody titres allow detection of a difference between women with normal and pathological cervixes and that such antibodies are due to the reactivation of latent HSV 2 infection favoured by dysplastic cells. It remains to be seen if those women with rising HSV 2 titres will develop carcinoma, and conversely if a falling titre will be associated with regression and cure.

Peter Reeve

Current concepts of herpesvirus infection in the woman

AMSTEY, M. S. (1973) *Amer. J. Obstet. Gynec.*, **117**, 717

Neonatal Herpesvirus hominis infections

JOHN, R. W., and TOBIN, J. O'H. (1973) *Postgrad. med. J.*, **49**, 380

Herpes simplex virus infections

JUEL-JENSEN, B. E. (1973) *Postgrad. med. J.*, **49**, 375

Infection with herpes simplex viruses 1 and 2 NAHMAS, A. J., and ROIZMAN, B. (1973) *New Engl. J. Med.*, **289**, 667, 719, 781

Therapy of herpes simplex virus infections: A prospective view

SCHWARTZ, J., and ELIZAN, T. S. (1973) *Mt. Sinai J. Med.*, **40**, 641

Herpes viruses and cancer

RAFFERTY, K. A., JR. (1973) *Sci. Amer.*, **229**, 26

Herpes simplex meningitis: herpes simplex virus Type 2 in CSF

STALDER, H. OXMAN, M. N., DAWSON, D. M., and LEVIN, M. J. (1973) *New Engl. J. Med.*, **289**, 1296

Resistance of hamster cells transformed by herpes simplex virus Type 2 to superinfection by herpes simplex viruses

DOLLER, E., DUFF, R., and RAPP, F. (1973) *Intervirology*, **1**, 154

Deoxythymidine kinase from rabbit kidney cells infected with herpes simplex virus types 1 and 2 OGINO, T., SHIMAN, R., and RAPP, F. *Intervirology*, **1**, 80

Other sexually-transmitted diseases

Extensive vulval condylomata acuminata necessitating

Caesarean section WILSON, J. (1973) *Aust. N.Z. J. Obstet. Gynaec.*, **13**, 121

A 17-year-old unmarried Cook Islander was first seen at the antenatal clinic when she was 38½ weeks pregnant. She was found to have extensive vulval warts extending into the lower vagina. There was a marked vaginal discharge. Investigation revealed that she had trichomoniasis and gonorrhoea. STS were negative.

She was treated with penicillin, probenecid, and metronidazole. No active treatment of the condylomata acuminata was possible because of the imminence of delivery, and a lower segment Caesarean section was performed at term. The baby's condition was satisfactory, but the mother developed an endometritis post-operatively; Klebsiella, Achromobacter, and a DNA-positive staphylococcus were cultured from a high vaginal swab. After a stormy course, and treatment with ampicillin and

cephalothin sodium, she progressed favourably. After 6 weeks the condylomata had regressed dramatically; she was later admitted to hospital for cauterization of the residual lesions under general anaesthesia.

In the light of her own experience and a review of the literature, the author suggests that treatment of condylomata acuminata in pregnancy should be:

In the first, second, and early part of the third trimester, secondary infection should be treated with antibiotics, and specific infections such as trichomoniasis, candidosis, and gonorrhoea eradicated. Surgical treatment should then be carried out.

In the latter part of the last trimester, infection should be controlled and active treatment reserved for those cases showing no regression after 6 weeks in the puerperium.

The method of delivery is determined by whether the condylomata present an obstruction to vaginal delivery.

J. D. Oriel

Scabies MIKHAIL, G. R., and KRULL, E. A. (1973) *Arch. Derm.*, **108**, 424

Phthiriasis palpebrarum [In Polish] KWIATKOWSKA-KAWECKA, Z. (1973) *Klin. oczna*, **43**, 325

Protein synthesis and cell surface proteins in molluscum contagiosum virus-infected cells BERNARDINI, A., DEL BARRIO, G., and LA PLACA, M. (1973) *Arch. ges. Virusforsch.*, **42**, 355

Public Health and Social Aspects

Sex education in schools SINACORE, J. S. (1973) *N.Y. St. J. Med.*, **73**, 2914

Abortion and the pregnant teenager LIPPER, I., CVEJIC, H., BENJAMIN, P. and KINCH, R. A. (1973) *Canad. med. Ass. J.*, **109**, 852

Results of the VI All-union Congress of Dermato-venereologists TURANOV, N. M., STUDNITSYN, A. A., KALAMKARYAN, A. A., and MORDOVTSSEV, V. I. (1974) *Vestn. Derm. Vener.*, No. 1, p.12

Venereal Diseases in the Rhone Department in 1971 (Les maladies vénériennes dans le Rhone en 1971) THIERS, H., KADI, M., and RACOUCHOT, J. (1973) *Bull. Soc. franç. Derm. Syph.*, **80**, 307

Miscellaneous

Hepatitis-B antigen in saliva and semen HEATHCOTE, J., CAMERON, C. H., and DANE, D. S. (1974) *Lancet*, **1**, 71

Saliva and semen samples from 24 men positive for hepatitis B antigen (HBAG) were examined for the presence of HBAG. Eighteen of the 24 saliva specimens and ten of nineteen available semen specimens were shown to be positive for the antigen using a sensitive radio-immunoassay technique. Results were confirmed by sub-typing the specimens, this test also being carried out by radio-immunoassay.

The amount of HBAG present in the saliva and semen was considerably less than in the serum, the ratio in the semen as compared to serum being in the range 1/1250 to 1/250,000.

The discussion deals with possible role of the sexual route in the transmission of serum hepatitis. However, it is pointed out that at present there is no means of proving whether or not the trace amounts of HBAG present in the saliva and semen would be infectious.

J. D. Almeida

Isolation of viruses, bacteria, and other organisms from venereal disease clinic patients: methodology and problems associated with multiple isolations WENTWORTH, B. B., BONIN, P., HOLMES, K. K., GUTMAN, L., WIESNER, P., and ALEXANDER, E. R. (1973) *HLth Lab. Sci.*, **10**, 75

During a study of cervicitis the cervical swabs of 100 patients attending a VD clinic and 100 controls

were investigated for *N. gonorrhoeae*, *Chlamydia* species, *Mycoplasma* species, *Herpesvirus hominis*, cytomegalovirus (CMV), *C. albicans*, and *T. vaginalis*. A total of 385 cervical specimens were examined. More than one agent was identified simultaneously in 61 per cent. and up to six agents in 35 per cent. The most prevalent organisms were:

T-strain mycoplasma (85 per cent.), *M. hominis* (46 per cent.), CMV (23 per cent.), *Chlamydia* (22 per cent.).

Most associations appeared no more frequently than would be expected from a random distribution, the exceptions being CMV + *T. vaginalis*, CMV + *Chlamydia*, *N. gonorrhoeae* + *Chlamydia*, and *Herpesvirus* + *N. gonorrhoeae*.

The conclusion is drawn that there is no pronounced association between organisms and that the high percentage of multiplicity of agents commonly regarded as pathogens casts doubt on their pathogenic significance. It is felt that one should view with caution the results of studies where specimens are examined for only one agent. The clinical and epidemiological aspects of this study are to be published.

G. W. Csonka

Venereal diseases of infants and children at Duke University Medical Center TOMEH, M. O., and WILFERT, C. M. (1973) *North Carolina med. J.*, **34**, 109 18 refs

The authors begin by noting that their city has the fourth highest incidence of gonorrhoea in the U.S.A. according to the statistics for 1971; the gonococcal infection rate in Durham, N. Carolina, is 1670.6 cases per 100,000 population. They summarize their experience with syphilis, but devote most space to reporting on paediatric patients with gonococcal infection. They review the cases of infants and children with gonorrhoea who were seen at Duke University Medical Center between 1964 and 1971. Eight of the patients, all of them neonates, had conjunctivitis. Five girls between 5 and 15 years of age had peritonitis, and three girls, of whom the oldest was 7 years old, had vaginitis. One male infant aged 18 days had polyarthritis, and two

young boys aged 7 and 13 years had gonococcal urethritis.

During the survey period, three infants with congenital syphilis and a 4-year-old girl with acquired syphilis were seen.

J. R. W. Harris

Non-venereal syphilis and Australia antigen among the G/WI and G//Ana San of the Central Kalahari Reserve, Botswana

NURSE, G. T., TANAKA, N., MACNAB, G., and JENKINS, T. (1973) *Cent. Afr. J. Med.*, **19**, 207

203 Bushmen from the Central Kalahari Reserve were studied. No data on the incidence of clinical treponemal infection are given, but Kolmer Wassermann tests were found positive on the sera of 26 of 39 children aged 16 years or less, and in 82 of 164 adults. Titres of 1:32 or more were taken to indicate active infection. These were found in fourteen of 22 boys and five of seventeen girls and in six of 84 adult males and fifteen of eighty adult females. This gives the picture of a treponemal infection which affects children more than adults and is compatible with the pattern of endemic non-venereal syphilis. Treatment with long-acting penicillin was given to all who would accept it, but no serological follow up studies were carried out.

Australia antigen was demonstrated in 14 per cent. of the 203 sera. No significant differences were found between the prevalence in children and adults or between the sexes. No cases of jaundice were seen during the survey.

A. E. Wilkinson

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Virus infection of the kidney and urinary tract

LEADER (1974) *Lancet*, **1**, 19

Preoperative vaginal bacteria and postoperative infections in gynaecological patients

NEARY, M. P., ALLEN, J., OKUBADEJO, O. A., and PAYNE, D. J. H. (1973) *Lancet*, **2**, 1291

Co-trimoxazole and blood

LEADER (1973) *Lancet*, **2**, 950

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AGGARWAL, J. L. (1973) *Brit. J. Ophthalm.*, **57**, 704

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ABDALLA, M. I., and BAHGAT, N. EL-D. (1973) *Brit. J. Ophthalm.*, **57**, 706

Treatment of Behçet's disease by immuno-depressors [In French]

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Serological studies in asymptomatic congenital cytomegalovirus infection

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Acute epididymitis in Vietnam: Review of 52 cases

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Puzzling penile pore

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